

## Portland's Stormwater Marketplace

Animating Market Forces for Sustainable Stormwater Management



**Tom Puttman** | TSSI | Transformative Sustainable Services Inc

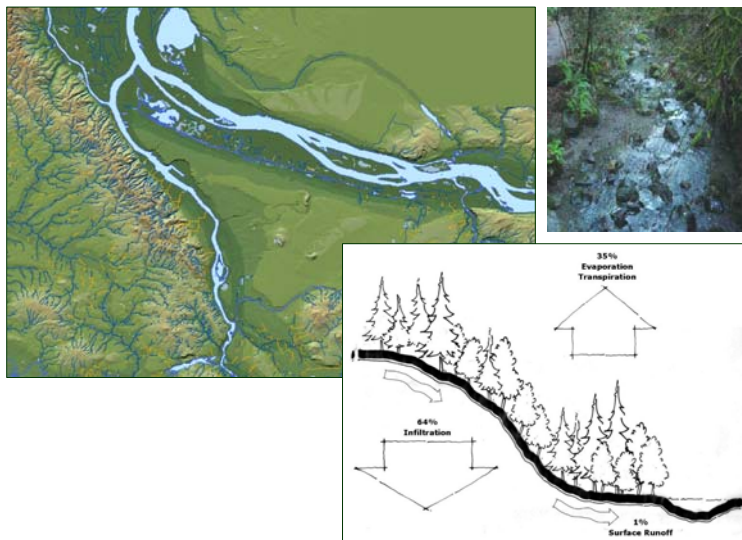
**Dan Vizzini** | Portland, Oregon | Bureau of Environmental Services



5<sup>th</sup> National Conference for Nonpoint Source and Stormwater Outreach | Portland, Oregon | May 14, 2009

## 150 years ago

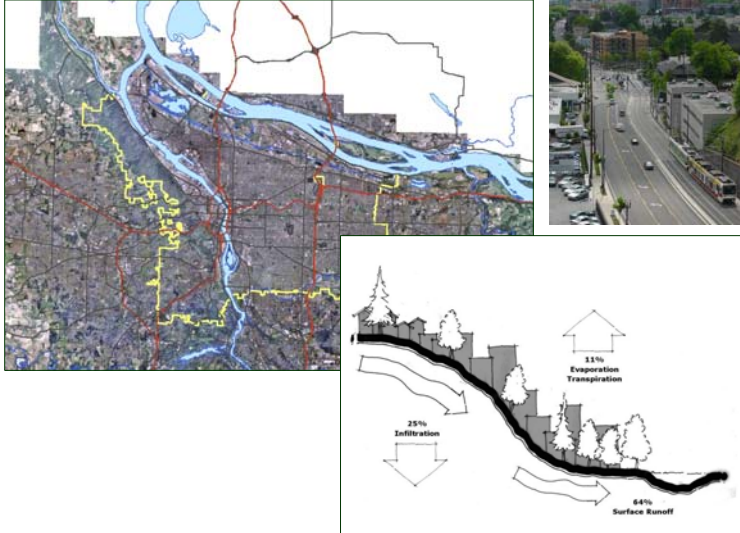
a landscape, shaped by fire and ice, verdant and teeming with wildlife, balanced and sustainable



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## 150 years of urban development

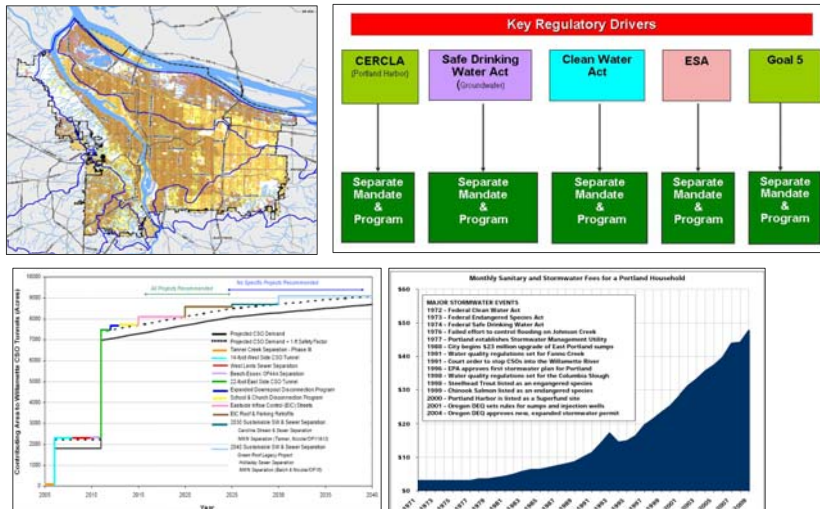
yields a landscape reshaped by buildings and roads, defined by boundaries and divorced from nature



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## Shaping Forces

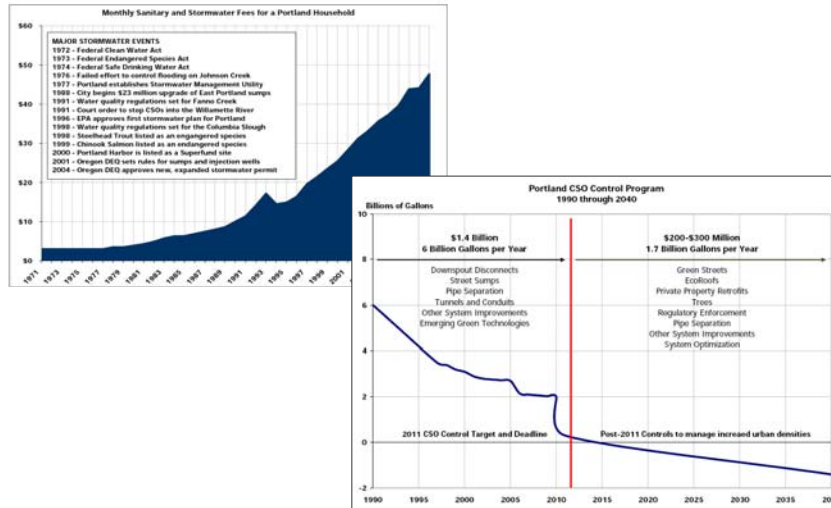
Science, regulation, system demands and economics conspire to transform stormwater management



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## Portland's Convenient Truth

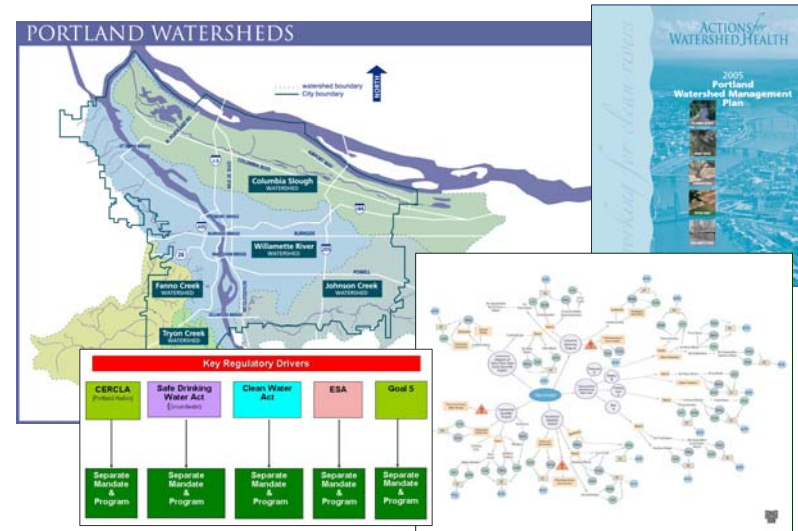
Ratepayers can not sustain the rate increases required by transitional stormwater management systems



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## Good science, watershed characterization and systems analysis

inform Portland's integrated approach to restoring and protecting watershed health



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## Let nature be our guide

sustainable management integrates natural functions into the developed landscape

1. Manage runoff as close as possible to its source.



2. Mimic natural hydrologic functions.




3. Integrate runoff into the built environment.



4. Design for multiple and sustainable benefits.

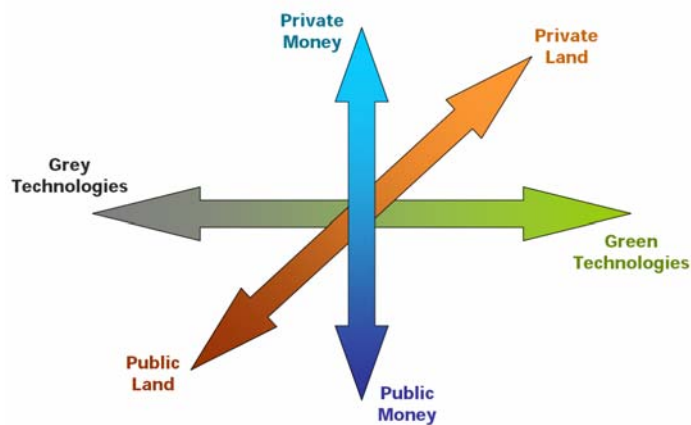



5. Act early to avoid costly mitigation and restoration.

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## Local, private and green

sustainable stormwater management reflects an evolution in science and technology

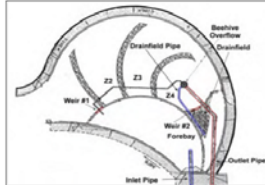


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### Cornerstones of sustainable stormwater management

effectively align leadership, communications, technologies and markets to promote private action

**Invested  
Leaders**




**Technical  
Competence**

**Integrated  
Markets**

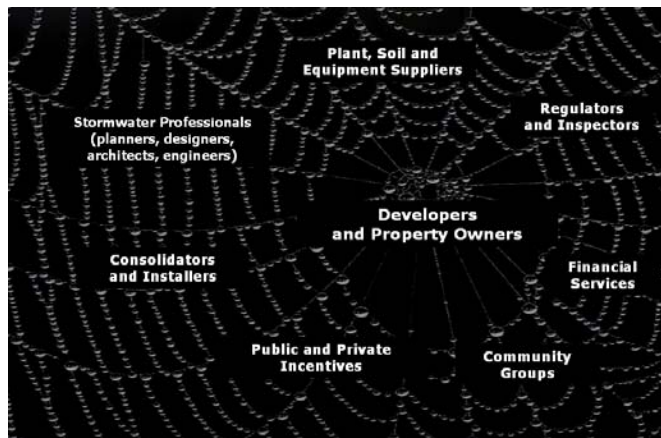



**Effective  
Communications**

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### Moving beyond regulation and enforcement

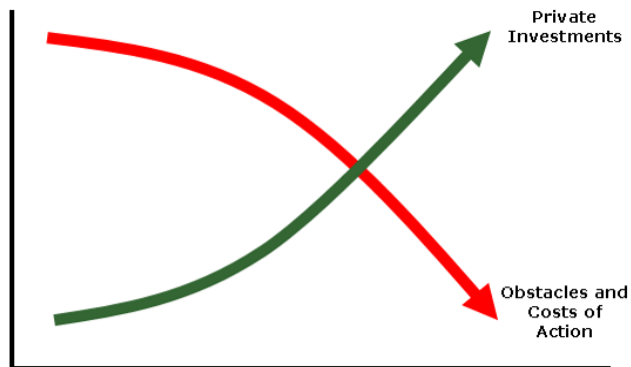
coordinating a web of support services, incentives and market forces to animate private investment




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## Multiplying private stormwater investments

will require comprehensive strategies to remove obstacles, reduce costs.



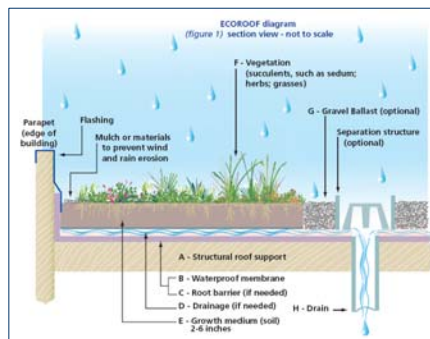
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## Supply-Building

increasing the number and competency of local stormwater businesses

### The Eco-Roof Marketplace

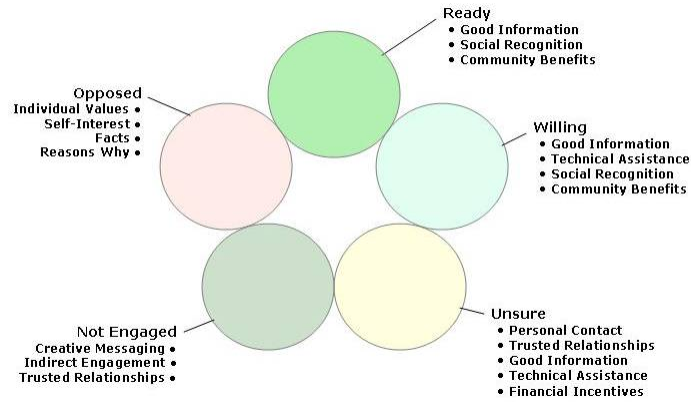
- Structural engineering
- Building and site assessment
- System design
- Suppliers
  - Flashing
  - waterproof membrane
  - root barrier
  - growth medium
  - mulch and gravel
  - Vegetation
  - drainage components
- Project staging and logistics
- System testing and inspection
- Maintenance
- Project financing



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## Stimulating Market Demand

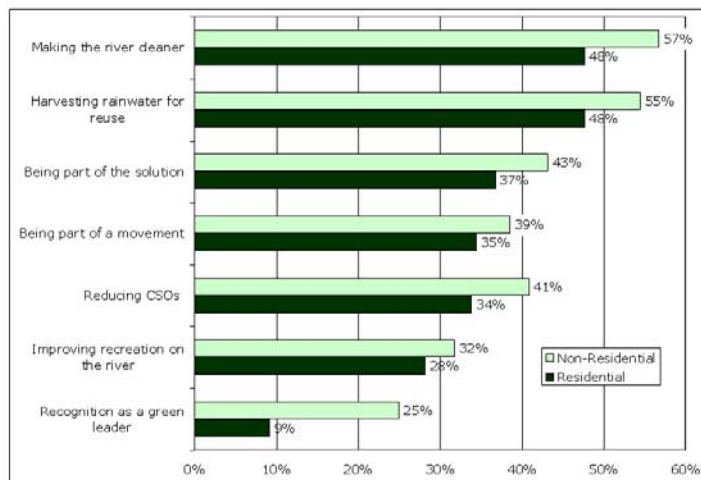
understanding the motivations and obstacles to increase private investment



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## Practical Motivations

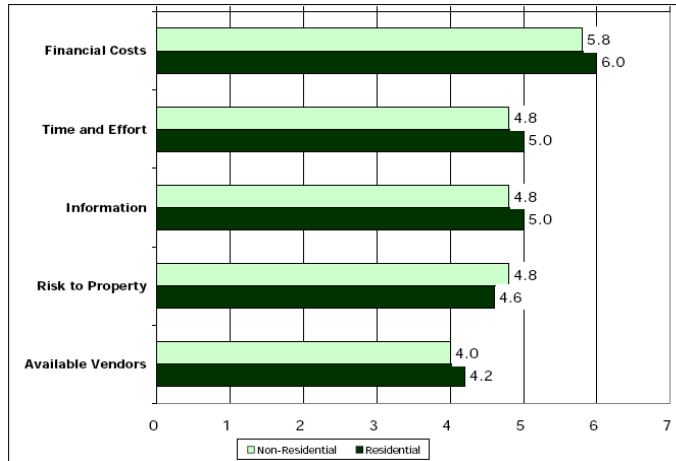
property owners are willing to invest if they can see results




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## Obstacles to Action

finances, time commitments, information and risks to property




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## Money Matters

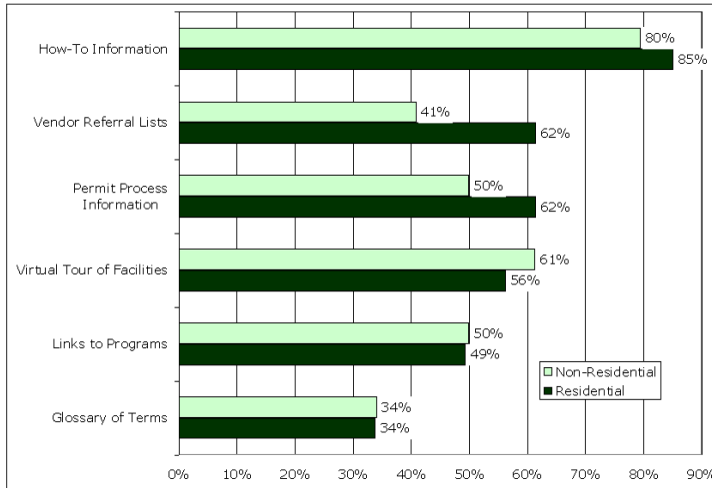
property owners are willing to invest if the city is a partner

- 62% of property owners are willing to invest in stormwater management when made aware of city utility investments in public facilities and efforts to avoid future utility costs to protect the river.
- Residential Property Owners are willing to pay...
  - 26% of a facility costing \$750
  - 20% of a facility costing \$1,000
  - 10% of a facility costing \$3,000
- 9 out of 10 residents will invest \$100 or more.  
A third are willing to spend \$500 or more  
28% are willing to pay twice as much for a facility that is 5 times more expensive
- Commercial Property Owners are willing to pay...
  - 24% of a facility costing \$3,000
  - 17% of a facility costing \$5,000
  - 9% of a facility costing \$10,000
- 30% of commercial property owners will pay twice as much for a facility that is 5 times more expensive

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## Internet Resources

online information and resources can play a powerful role in moving property owners to action



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## ProjectDX

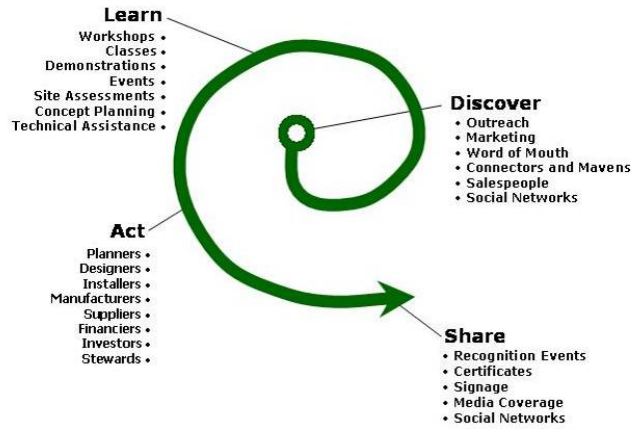
connects people to information, ideas, incentives and the stormwater marketplace.



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## The Stormwater Journey

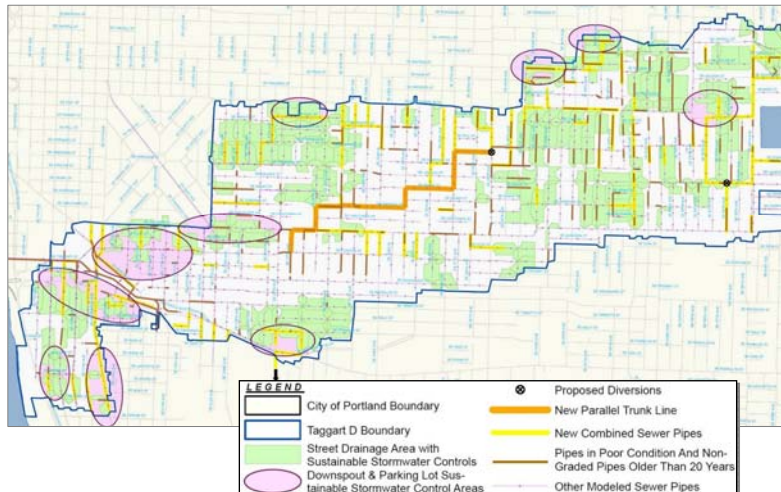
moving property owners from discovery to action



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## Brooklyn Creek Basin

a proving ground for the stormwater marketplace



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## Next Steps

animating the stormwater marketplace




**Understand consumer motivations and obstacles to action private stormwater investments**



**Expand the local economy of stormwater product suppliers and service providers**



**Use information technologies and social marketing to link property owners to information, incentives and resources.**

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## Partners

The Portland Stormwater Marketplace Project is indebted to the pioneering work of these firms. Their assistance and support, insights and observations, and creativity was invaluable to the project.



**David Evans and Associates**  
Project Design and Management, Principal Investigation



**CH2M-Hill**  
Engineering and Modeling




**Hansa/GCR**  
Market Research Design, Execution and Analysis



**ECONorthwest**  
Economic and Market Analysis and Modeling



**Transformative Sustainable Solutions Inc**  
Interactive Internet Site Design and Development

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In addition, the City of Portland owes a debt of gratitude to two former employees. Jim Middaugh, currently the Communication Director at METRO, was the visionary leader who initiated the marketplace project and lead its early development. Gordon Feighner, now with the Citizens Utility Board of Oregon, was the project's researcher and economic analyst and was instrumental in the development of evaluation tools to measure the costs and benefits of investments in stormwater management.

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Project Web Site: [www.portlandonline.com/bes/index.cfm?c=44048&](http://www.portlandonline.com/bes/index.cfm?c=44048&)



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